PATENT

INSTITUT FRANÇAIS DU PETROLE

METHOD OF EVALUATING THE CAPILLARY PRESSURE CURVE OF ROCKS OF AN UNDERGROUND RESERVOIR FROM MEASUREMENTS ON DEBRIS

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ABSTRACT

- Method of evaluating the capillary pressure curve of rocks of an underground reservoir from measurements on rock debris or fragments such as cuttings from the reservoir, over the total saturation range of these rocks, within a short period and at a low cost, from these measurements.

- It essentially comprises measuring the permeability k of the debris, measuring the capillary pressure curve Pc as a function of the saturation of these fragments initially saturated with a fluid (brine for example) by subjecting them to centrifugation, and parametrizing a capillary pressure curve Pc satisfying empirical relations depending on adjustable parameters, constrained to adjust to an asymptotic part of the capillary curve measured by centrifugation, and to the value of permeability k measured on the cuttings, so as to obtain the whole of the capillary pressure curve.

- Applications : hydrocarbon reservoir evaluation for example.